

The Boston Hearth Project

T.X. Watson

Arrival-Date: Wed, 16 Mar 2022 20:17:37 -0400 (EDT)

Query: Application essays

Hi Kim,

I'm writing to ask a few questions about my application; I've written an answer for the question "When have you worked well as part of a team?" but I'm concerned about the legal consequences it could have for certain people involved if information in it were made public.

I'm applying to X.S.U. in large part for your record of support for digital activism and human rights, and I want to confirm that your reputation is reflected in your administrative policies.

My questions are:

Is the application evaluation process confidential?

How seriously do you take information security at X.S.U.?

Do you retain a database of applications after you make your decision?

Thanks,

Andie Freeman

Zie/Zir

halogen@fmail.com

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Arrival-Date: Mon, 21 Mar 2022 11:19:06 -0600 (MDT)

Re: Query: Application essays

Hi Andie,

Thank you for writing. In response to your questions:

Yes, the application process is confidential, and our evaluators are strictly instructed not to share any details. Furthermore, the identities of

evaluators are as a rule not connected with specific applicants, so there would be no way for a third party, for example a court, to compel an admissions staffer to speak with certainty that they could get specific information about your application. We take this confidentiality seriously, and the consequence for breach of confidentiality is termination.

X.S.U. takes information security very seriously, and will match the level of security you prefer. If you would like, we can receive your application through encrypted email rather than the form on our website.

Normally we keep full applications on record for 5 years after they're received. At your request, we can expunge the majority of that data and retain only a basic set of necessary administrative information and our decision.

I hope these answers cover your concerns.

Best wishes,

Kim Ellis

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Arrival-Date: Mon, 21 Mar 2022 16:08:09 -0400 (EDT)

Re: Re: Query: Application essays

Hi Kim,

My application is attached.

Thank you so much,

Andie

attachment: 20220314-XSUapp-Andie-Freeman

[abridged]

Essay question: When have you worked well as part of a team?

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When I was 15 I won my first national gaming competition. This was not team-based. I played LiveFire 2190 competitively for most of my teens, and I got very good. As a result of my performance in the 2017 Nationals I was invited to try out for a position on an e-sports team who were going to compete in a new hybrid e-sports game called FREON. It was a quasi-alternate-reality arena puzzle-and-shooter game that involved one or more players per team in a complex physical arena, and a player at a control panel. The arena players wore Augmented Reality kits (they called them F.A.R. kits, for FREON Augmented Reality) and the control players would operate the kit's display to give our arena players detailed instructions on how to solve dynamic problems. Control players always had access to more information than arena players, so the communication element was vital.

There were three of us on the team: me, the control player, our arena player Conrad, a kind of sketchy white boy who got picked because he was good at gymnastics, and our team captain, Kay St. Anne, who apart from playing e-sports was an activist for homeless queer youth in Boston.

By the time things played out we had been able to practice with the equipment for several months, and played a few matches, but FREON got cancelled before the end of its first season due to poor viewership. Conrad threatened to sue the network, which was embarrassing for everyone involved. After that, he went home.

At this point I had already committed to a gap year after high school, and I had nothing to do. Fortunately, Kay offered to let me stay with her and do activist work so I had something to put on my resume for the space I'd reserved for "E-sports championship."

Kay lived in an old retrofitted church, with a windmill on the spire and transparent solar panels in front of the stain-glass windows. There were always eight or nine people living there, though the specifics varied. Kay and some other tech geeks used the basement as a hacker space, and she let a group of other volunteers use the kitchen to make food to give away almost every day. They fed us, too, but I'm pretty sure Kay paid for a lot of the supplies.

What I did with Kay was the most rewarding and important thing I've done so far in my life. To explain why, I need to establish two things:

1. The rate of winter deaths of homeless people in Boston has been increasing every year since climate change has made weather patterns more and more erratic. The city was never equipped to protect the homeless during polar vortices, and it was getting worse, not better. There had been no new construction of homeless facilities, and two closures, in the last five years.
2. The city of Boston built, and was about to open, a new living building: the Hale Center. It was a big fifteen-story Art Deco Revival temple with a custom-engineered closed ecosystem. It was basically a first class hotel, set up so that business people and politicians wouldn't have to go around interacting with the actual city. And it's the most thoroughly self-supported Smart Building to date in Massachusetts.

We thought it would go to better use as a house for the city's homeless, so we decided to take it over.

If you want to confirm, google the Boston Hearth Project. For mainstream news my favorite write-up about it is on *The Guardian's* website, but overall the news is only really good for confirming that it happened. You won't see my name in any articles, although I am credited in the Hearth Project website as a volunteer.

We were going to do it like we did FREON matches: I'd run an A.R. panel and guide a teammate.

Kay had taken apart the F.A.R. kits and put them back together several times, and she basically knew how to make one. She used an open-source A.R. platform called AugR to build our kit, and made it mimic as closely as possible the gameplay-style interaction that FREON had used.

She was managing probably three or four teams of people on this project, so after building the system she did one last thing before leaving me pretty much in charge of the plan:

She introduced me to Juniper.

Juniper Berg is an "urban explorer," which means she's very good at breaking into buildings. (She is also applying to X.S.U. this year. You should let her in. Also, you shouldn't hold "she's good at breaking into buildings" against her.)

She's a traceuse (she does parkour) which is a much more versatile athletic skill set than Conrad had. That took a lot of getting used to. When

we trained, it took a long time before I stopped failing to notice what she saw as the most sensible way to achieve an objective, which usually included getting into places that looked impossible to reach.

Practicing with AugR was like learning to operate another body. I learned new limits for what was physically possible. I know how far back Juniper's arms can go before they hurt, and how much farther before they'll keep hurting afterward. I know how high she can jump. I know how soft she can land.

Two days before the night of the show (that's what we were calling it in case we were being recorded), we moved my kit to a hotel room up the street from the building, where Juniper and I stayed to be ready. It was a very expensive room and it felt less safe being so physically close, but we needed the fast response times through our own ad hoc wireless network, which was made of signal-carrying bugs Kay and her colleagues had stuck all over shadowy parts of buildings on this street and around the Hale Center. My signals had to get to Juniper fast. The potential consequences of a bad lag spike ranged from getting her caught to getting her killed.

On the night, Juniper was dressed up like half an angel, half a spy. Her outfit was all dark blues and muted greens, which would stand out less than black in partial light. It was loose, but with almost no stray fabric.

She had bought me a matching robe, so we'd have team colors. I was wearing it.

Her visor was close up against her face, a sleek glass pane across her eyes. The prism technology and coating on the visor made it anti-reflective, obscured the AugR display from the outside, and disrupted face-detecting software. There were cameras on the front and back, so I had a full 360-degree view of the world around her head. (She had buzzed her long black hair off to avoid obscuring the camera's view.)

She had a few more gadgets, as well:

- Two nearly silent camera drones smaller than her fist, which can hover in place for about two hours, or fly around for half an hour,
- A car key fob that was repurposed to transmit passwords wirelessly (Kay's informants had gotten some of the less secure passcodes off of sympathetic or apathetic employees, which was how we discovered

that many of the Hale Center's passcodes were still left on their factory defaults),

- Print-obscuring fingertip sheathes, climbing gloves, sneakers, and
- A pair of slippers with about an inch of foam in them to muffle sound.

My kit included a massive tablet monitor angled toward my lap, a schematic screen with my annotations above it to the left, a web browser independent of the system to the right (for urgent new research, disconnected from the AugR so it could be linked to the internet without compromising us), a central monitor to show me whatever displays I wanted moment to moment, and side monitors for window management. I had a stylus, two keyboards, and two mice, and it had taken me a long time to get the hang of using the right controls for the right functions.

I used my motorized wheelchair, which would normally have a cell network link and a tablet screen, but those had been stripped out for security reasons. My crutches were always nearby, but the chair seemed like a better decision that night because I didn't want to over-exert myself on anything other than focusing on the mission. Our cell phones were turned off and securely deposited in the mini fridge.

The Hale Center had been turned on in October, and by the day we went in, November 8, it was just about furnished. The grand opening was a few days out. This would be our best and only shot.

Plus, we had postered, and it was going to rain.

One of Kay's colleagues had used a combination of glues and solvents to build a kind of poster that could look like a regular ad when it was posted, but once it was rained on, the poster would slough off and it would leave behind the white linework that was worked into the adhesive. Huge advertising posters all around town were set up to turn into murals that said "Help occupy the Hale" and "Come to Hale Homeless Shelter" the following morning, all with an artistic rendering of the Hale Center that featured key alterations and a link to BostonHearthProject.org.

So we'd never get a second shot if we weren't ready to defend the Hale against the police in the morning.

Juniper kissed the top of my head and left the hotel room at 4 a.m. At 4:06 she was behind the Hale Center.

She went in through a sixth story window because the first five stories had a different kind of window that wouldn't open wide enough. She used the key fob and all the windows 15 feet around her slowly glided open. She rolled in, using her weight to pressure the screen partway out of its frame, bending it enough that she could slip through but not so much that it disconnected on any emergency-system-triggering points.

Juniper ditched her climbing gear and switched from sneakers to slippers, then left the conference room she'd landed in and headed for the northeast stairwell. There, she went from the sixth floor to the third, over railings in a few leaps that made me a little dizzy (it was unnecessary but she's kind of a showoff), then back into the building proper. The northeast stairwell was primarily a fire escape, and so only led out to ground level; basement access was a little more secured.

The third floor was the top level of the atrium, so past a couple hallways she was looking out over the entryway—this was the only place in the building containing a security guard. He was distracted by his phone.

Juniper took out one of the mini drones, unfurled its wings and, crouching, slipped close enough to the railing to drop it before sliding back into the safe space out of sight. Once it was out of her hand I turned it on, and it was flying after about a three-foot drop.

The atrium was lit like moonlight—gentle, dim blues tinted everything, with only the rare lights of cars passing by providing the color and relief that would distinguish Juniper from a piece of furniture or a pattern on the wall.

It was beautiful, but we could do a little better. I added a filter to Juniper's display that amplified certain color bands so she'd see the detail the guard wouldn't.

I put the drone's camera display into Juniper's field of view, on the lower left, then I moved the drone down carefully until I could tuck it just under the second floor walkway.

Other subtle cameras glinted around the first floor lobby, and I marked them in the schematic with generous estimations of their field of view, rendering as translucent red cones on Juniper's AugR.

With the drone trained on the guard, I set the camera to detect motion, with an alert threshold of 10 percent for me, 30 percent for Juniper. Then I pulled the direct display out of her face.

“Ready?” I said, which the AugR relayed to her using bone vibration, projecting no sound into the air.

“I’m ready,” she responded, in an utterly silent whisper that the AugR picked up and vocalized on my end. (It catches her pace, intonation, and mouth movements, and renders it in a computer tone, like somebody made a text-to-speech app with her accent. It’s weird, but cute. We still use it instead of phone conversations sometimes.)

I dropped a countdown into her field of view.

3 . . . 2 . . . 1.

She went over the railing and back under it onto the second floor in a motion I didn’t even really understand.

The guard moved; 25 percent. I put a “QUIET” notification on Juniper’s display, a bright yellow word that took over the point of her eyes’ focus for a split second then faded and moved to the side. She flattened herself into the corner of the floor and the wall, waiting for my signal.

I had the “QUIET” notification set up to trigger a stopwatch on one of the side displays, so I know that I left it there for 41.899 seconds, and I know that the guard had returned to below 2 percent movement by 10.

After I stopped the notification, I highlighted the railing in yellow, for caution, indicating that she should look. She did; the guard was still distracted. I made a judgment call that still makes me nervous to think about.

She could have gone around to the west side of the atrium and dropped pretty much perfectly into place, but if she did, she’d be landing on tile. She’s quiet, but not so quiet that a 10-foot drop onto tile is silent. The alternative was to aim for the carpet, which would muffle the sound, but she’d be landing directly in the guard’s line of sight and have to tumble into position behind the other side of his desk.

I breathed in, shut my eyes, opened them, and dropped a target on the carpet.

Juniper sailed over the railing like she could fly. She hit the mark perfectly, and followed it up with a beautiful roll.

I think. I slammed my eyes shut again for that part.

But when I opened them she was behind the desk and the guard was still as a statue. (The motion detector was flaring, because Juniper had rolled

through the frame. I killed that process immediately, and dropped a quick “Sorry” into her display for the false alarm.)

“No worries,” she said silently.

The next target was the open threshold into the hallway that contains the staircase to the basement. I threw up some quick graphics that showed Juniper in splashes of red and yellow that there was no path to the threshold that avoided both the camera’s eye and the possible range of view of the guard from his chair. Juniper opted for the guard’s view, and it paid off. She got behind the threshold—I told her to freeze, and dropped a “QUIET” notification.

The guard had stood up.

He walked past the edge of his desk, into the range of space where he could have spotted Juniper, if he knew to look for her.

He glanced about and seemed to decide he’d been hearing things. He returned to his post.

Juniper was exceptionally silent on the way down the hall.

The door at the end on the left that she needed to open was locked, though. When she placed her fob against it, the door beeped loudly and clattered as she turned the handle. She stepped through and held the door open, standing still, awaiting my word.

The guard had moved his head, but he had not put his phone back down. I wrote “Shut door quietly” and Juniper slowly, gingerly let the door move back into place in the frame while holding the inside handle down, and once it settled she slowly lifted her hand to let the bolt slide back into place.

Then she started walking down the stairs.

“Could you reassure me about the guard?” she said, and I put the video feed from the drone back on her screen for a bit. The guard’s face was deeply focused on whatever he was doing on his phone, which was held sideways.

“My guess,” I said, “is that he really doesn’t want there to be someone here because that means he has to do stuff apart from play Polybius.”

Two floors down, it was reasonable to assume that the guard wouldn’t hear the door, so Juniper used the fob and opened it casually.

The basement was a laboratory as much as it was anything, containing massive tanks that worked as water filters and oxygen scrubbers, growing

carefully-controlled masses of algae, and glass-walled cells with keycard readers that provided access to the tanks.

If this system were shut down, the building would be physically uninhabitable within a week, and unrecoverable a week after that. The energy output and air management that came out of this system was the key to our long-term control plan so we needed to retain its full functionality but disconnect it from possible remote control.

I had spent half my free time for a month reading everything I could about this system, and everything I could about systems so much as mentioned by the scientists and architects that collaborated on the system. I didn't know where they were, but I knew there would be two redundancy boxes—one that contained a computer, and one that contained a physical cable.

Juniper found the one with the physical cable first, so she opened up the box and then left it behind, because that one came last. She moved on to find the computer. She and I searched separately—I used the second drone—and it took about 10 minutes to find.

Once we found it, Juniper rested her fingers on the keyboard and awaited my instructions.

The AugR can't give me physical control over Juniper's body, but we practiced this technique for hours every day since we decided to break into the Hale Center, and Juniper got it down better than Conrad had ever been able to.

As I typed on the keyboard in front of me, the keys in their relative positions flashed in front of Juniper's field of vision. She read that input and channeled it through her body onto the keyboard. It's like psychically controlling Juniper's fingertips. She's incredible.

The computer connected the system to the building's intranet, which was how we needed to control the system, so we had to reassign a whole bunch of server addresses. It was a pain in the ass but it worked for the moment. In the morning occupation, we'd be installing wireless boosters like we used to connect Juniper and me through the building without using cellphone networks, so we wouldn't be relying on externally-accessible connections.

The last thing to go after that was the physical failsafe connection: Juniper positioned herself at it, wrapped her hand around the cable, and

awaited my signal.

After this, it's a speed run. Into the stairwell to the seventh floor to change the passwords throughout the building, disable the cameras, and override safety mechanisms to weaponize the entryways. Then down to the lobby to kick the guard out and let the people in.

I dropped a countdown. 3 . . . 2 . . . 1.

Juniper pulled the plug, dropped it on the ground, and stomped on the prongs.

As soon as someone noticed, it'd be about eighteen minutes until we expected cops to arrive. In the meantime, they'd try to lock the building down (we just locked them out of that) and try to jam the wireless (we had our own network they wouldn't find in time). Noticing could take anywhere from a few seconds to until morning. But Kay would see it happen in real time, and would already be mobilizing people to march on the building.

Juniper went back to the stairwell and sprinted.

I checked in on the guard cam. It looked like he might have heard something, but it mattered less now. He wouldn't find her if he searched, and he'd probably just call the police, which changes basically nothing.

I checked back on Juniper. Floor 3, 4, 5, 6—

She burst onto the seventh floor, where an AugR map was waiting for her—a dotted line that led straight to the control room. She got there, used the fob to get in, went to the closest terminal, typed in the password (manufacturer default, again) and started mirroring my finger movements with an adrenaline-charged speed and focus that probably broke a record. Lots of “Are you sure?” notifications. Lots of administrator permission confirmations. Lots of screens. Safeties overridden. Passwords changed. Cameras off.

That took about seven and a half minutes, and once she was done Juniper bolted out of the room toward the stairs.

The guard definitely heard her this time. And, because she likes showing off, she left the stairwell at the second floor and headed for the atrium, vaulting over the railing and landing in a clean tumble to a still position on one knee. The guard saw her, pulled out his Taser, pointed it, and fired.

It missed completely. He looked a little bit like there was a chance he'd cry.

“Put it down,” she said. He did. “Walk to the door.” She stood up. He walked to the door, with his hands up. “Go out.” He passed through the first bulletproof reinforced glass doorway, then the second, with Juniper behind him.

“This building is ours now. Get as far away as you can.”

He looked to his left and right, and threads of lines of people were converging on the building. He ran away.

Kay had a fob to get in that was set up with the new passwords we had prepped. She had activists bring in groups of folks coming in for refuge and coordinate the 200-odd people in small clusters.

She had three friends ready to pick me up with my equipment, and we were in the Hale Center’s parking garage before the first team of cops in riot gear showed up.

The garages had massive triple gates that could slam the building utterly shut, so it could manage its climate internally in extreme weather. After we got in, the lowest entrances got locked down. We took the elevator to the front hall where people were still filing in.

The air in the Hale Center is different than the city outside it. It smells like being outdoors, somewhere other than Boston. There’s no smell of cars and mud and construction. There’s no recycled-air-and-cleaning-products smell. There’s a breeze, and it carries the varied and pleasant scents of the building’s miniature biomes.

It was overcast outside, starting to rain, but in the building the sun was rising: lights like windows turned on and filled the big, open spaces with engineers’ daylight.

The building was our weapon as well as our hostage. We let riot cops crowd into the first doorways and set the heat to 115. Then a subset of brave volunteers would wait until they were just about boiled and let them in the building. Maybe 10 or so got in at a time, and if they hadn’t already stripped off their armor, they had heatstroke. We took everything and sent them back out in T-shirts and underwear. We disassembled their weapons, smashed important pieces with heavy objects, and rained down gun parts onto the tops of cop cars.

We held the building against an active siege for 49 days while a larger and larger body of volunteers came out to the city to join the cause. (We had a great social media team, without whom we’d never have gotten to keep